Title: Taking Bazin Literally

mariosluganl@gmail.com

Department of Film and Television Studies

Millburn House

University of Warwick

Coventry, CV4 7HS

Mario Slugan holds a PhD in cinema studies and is currently an Associate Fellow at the University of Warwick. His interests include film theory, early cinema, and interwar avant-garde. His essays have appeared in a volume on fiction *How to Make Believe* as well as in *Slavic Review* and *Early Popular Visual Culture*. Presently, he is preparing a monograph on the perceptual experience of montage.

Word count: 9648 (including bibliography, endnotes, and placeholders)

Number of figures: 3

Acknowledgment:

I would like to thank Daniel Morgan for comments on the draft version of the article.

Abstract

In this article I aim to argue against the standard readings of Bazin's seminal essay "The Ontology of the Photographic Image" which are based on C. S. Peirce's account of indexicality but for reasons distinct from recent influential criticism of this approach in film studies (Morgan 2006). I also plan to move beyond the accounts of Bazin in the analytic tradition (Currie 1995, Carroll 2008), by building on a rare analysis (Friday 2005) which takes Bazin's notion of identity between the photographic image and the model seriously. Whereas Friday proposes identity to be construed as psychological, however, I shall argue that, under the dual theory of light theory available to Bazin at the time, identity between the photographic images and object photographed *literally* holds for some photographs – viz. negatives of objects which emit light. I shall conclude with an explanation of why Bazin thought the identity holds for all photographs.

Keywords

Identity thesis, ontology of photography, index, André Bazin, dual theory of light

Introduction

André Bazin's "The Ontology of the Photographic Image" (2005: 9-16) counts among the foundational essays in both film theory and philosophy of photography. In film theory, the special relation to reality Bazin claims to hold for products of standard photography has since Peter Wollen (1969) been predominantly explained in terms of C. S. Peirce's notion of indexicality. In the analytically oriented tradition, both Gregory Currie (1995) and Noël Carroll (1986, 2008) have outlined their views on photographic and cinematic images in opposition to what they take Bazin's position to be.

More recently, both the analytic tradition and film theory has seen essays which set out to correct what they believe to be misinterpretations of Bazin. On the one hand, Daniel Morgan (2006) has criticized the explanations by commentators he refers to as index-theorists. On the other, Jonathan Friday (2005) has dismissed Currie's and Carroll's accounts of Bazin. Both Morgan and Friday have pointed out that standard descriptions fail to do justice to a peculiar brand of identity Bazin claims to obtain between the photograph and the object photographed. Whereas Morgan has stopped short of hazarding a detailed account of this identity, Friday proposed it ought to be understood as psychological. If Richard Allen's (2014) and Malcolm Turvey's (2011) recent juxtapositions of the two accounts are to be trusted, Friday's proposal stands as the more convincing one because it, unlike Morgan's, makes no appeal to material identity. By expanding on Morgan's work, I will be claiming that material identity is a necessary part for a fuller understanding of Bazin's claims on the identity of the model and the image.

I will start off by summarizing Morgan's and Friday's interventions and point to some problems in their respective accounts of Bazin. Contrary to Morgan, I will demonstrate that indexicality and identity are not mutually exclusive. In Friday's case, I will argue that Bazin speaks of more than psychological identity. In addition to psychological identity Bazin invokes a material identity understood as sharing a common being, i.e. as "being a part of". This is precisely the type of identity virtually all of Bazin's commentators either dismiss or do not take seriously. By taking a cue from Morgan and analyzing similes Bazin employs in his description of photography – the Shroud of Turin, fingerprint, mold, and death mask – I will propose that Bazin's notion of identity is nothing preposterous or metaphorical. Rather, it hinges on the contemporary dual theory of light which allows for understanding the light that makes up photographic images as a part of the object photographed. I will argue that under the dual theory

of light this is a perfectly good explanation for some photographs – namely negatives of objects which emit light. I will suggest that the idea of automatism paired with the contemporary theory of light and psychological commitments Friday elaborates upon, made it very easy for Bazin to apply this description to all standard photographs. In doing so he failed to see the importance that the fact of photographic printing has for his argument. What Bazin also neglected is, I will propose, the difference between emission and reflection of light, conflated in the notion of light coming from the object. The account I am proposing, therefore, helps us to understand not only how under the dual theory of light the most daring claim of Bazin's about the nature of photography does obtain in a number of cases, but also the logic behind Bazin's thinking. I will conclude with a discussion of whether the dual theory of light remains a valid theory today and by offering some thoughts on the consequences my argument has for construing the distinction between analog and digital photography.

Morgan's Analysis of Index Theory

Morgan's intervention is a part of a broader critique aimed against standard interpretations which see Bazin's commitments to aesthetics of film realism to derive from the claims he makes about the ontology of the photographic image.[1] Here I will focus only on the first step in this critique – viz. Morgan's dismissal of index theory as capturing Bazin's ontological claims.

Index theory, as it is usually articulated in film studies since Wollen regards the photograph to be an index within one of Peirce's trichotomy of signs – the other two being the icon and the symbol. Whereas an icon in some way resembles what it represents (e.g. a painting of a woman is an icon of that woman), and a symbol represents by way of convention (e.g. "woman" stands for woman by virtue of linguistic convention as much as "eine Frau" does), an index "is a sign by virtue of an existential bond between itself and its object" (Wollen 1969: 122).

Certainly, not all of the claims derivable from index theory may be found in Bazin, and some of them might even be directly contradicted by other things he says. For instance, it is unclear whether Bazin would side with index theory in describing animated cinema as non-indexical.[2] There are, however, at least two crucial points upon which index theorists and Bazin do agree. The first is that photographic films (which have not been tampered with) bear a special ontological relation to reality.[3] The second is that drawings and paintings do not preserve this special relation.

Morgan is predominantly concerned with the first point insofar he claims that indexicality does not fully capture the special relation Bazin has in mind. Morgan claims that three things follow from the standard index theory account. First, the photographic image and its object are ontologically distinct. Second, what a photograph is of is necessarily in the past. Third, we come to recognize the photograph as an index not in virtue of similarity it has to the object photographed but insofar we are aware of the mechanical process behind the production of photographic images. Although he concedes that there is evidence for all these entailments in Bazin, he argues that Bazin in fact explicitly dismisses the first one. And therein, according to Morgan, lies the crucial incompatibility between Bazin and index theory. I believe Morgan is correct to claim that Bazin takes the idea of identity between the model and the photograph seriously. I will argue for this in more detail in the next section because Morgan's argument in favor of this view is not crucial for him dismissing index theory. Where Morgan makes a mistake, I propose, is not that Bazin argues against the ontological distinction between the model and the photograph, but that index theory necessarily forecloses the possibility that an index may be identical to what it is an index of in the first place.

By referring to a photograph of a car as an example of an index, Morgan claims that index theorist is committed to saying that there is an ontological distinction between an index and what

it is an index of. Morgan appears to be envisioning this distinction in at least two ways. First, to take his example, the photograph of a car is not functionally a car for one cannot drive or wash it. Nor is the photograph numerically identical with the car one owns. Both claims are correct. But this is not to say that all indices need to be functionally and numerically distinct from what they are indices of, if, as Wollen claims, the point of an index is to serve as an existential guarantee of what it is an index of. I, for instance, guarantee that I was born, grew up, reached a certain age, etc. In other words, I am a guarantee of my previous selves. I was certainly not capable back then of everything I am now, or vice versa, but I am surely numerically identical with my past self. By the same logic the car I bought ten years ago is also an index of my car at the time of production. Having not replaced a single thing on it I dare say it is numerically identical with the car I bought then. Given that it is still running, it is also functionally identical. It is incorrect to claim then, as Morgan suggests, that there is no overlap between the relation of identity and that of indexicality.[4] In other words, there are a number of things which guarantee their previous selves.

Generally speaking then, there is no reason to think that this (or any other) Peirce's trichotomy describes relations between numerically distinct objects. Nothing in the abstract relation between the sign, the interpretant and the object suggests such a thing. Moreover, given that the relation of resemblance is constitutive of iconicity, we are forced to admit that every icon is necessarily an icon of itself. For objects resemble themselves insofar they are exactly like themselves.

There is another type of identity that is not explored in Morgan's account but which is also indexical – material identity construed as "being a part of". My car chassis is a part of the car and though it does not make up the functional equivalent to the car it does partake in the numerical identity of the car. Of course, the chassis and the car are not numerically identical because the

latter consists of other things as well such as engine and breaks. What I simply want to say, using Bazin's vocabulary, is that the car and the car chassis "share a common being". In other words, I take it that at least one meaning of his use of this phrase is the expression of the relation of material identity understood as "being a part of". And what I will be arguing in more detail below is that Bazin holds that it is precisely this type of identity that obtains between photographs and their objects.

This means that Morgan's dismissal of index theory as a description of Bazin's commitment is unwarranted. In fact, index theory's particular strength is the third entailment in Morgan's list – the theory captures what Bazin has to say about similarity relations:

> No matter how fuzzy, distorted, or discolored, no matter how lacking in documentary value the [photographic] image may be, it shares, by virtue of the very process of its becoming, the being of the model of which it is the reproduction; it *is* the model. (2005: 14, italics in the original)

As we can see, according to Bazin, the similarity between the model and the image of the photograph does not play a role in the special relation that obtains between the two. The same holds for the relation of indexicality. An oft cited-example of an index – a hygrometer – shares no similarity with either dryness or wetness of air. Nor do words understood as strings of phonemes or graphemes, in general, share any similarity with their representational content. In this sense, index theory is better equipped than Kendall Walton's (1984) transparency thesis to describe Bazin's stance, for one of the thesis' two necessary conditions is "the preservation of real similarity relations".[5] The inclusion of the same similarity relations also plagues Carroll's (1986) interpretation of Bazin under the name of "perceptual identity."

[Callout 1 about here] Nevertheless, although it survives the challenge that Morgan puts forward, index theory should still be rejected as an accurate description of Bazin. The problem is not that no index can be identical to what it is an index of. The problem strikes much closer to the concerns of film studies. In other words, index theorists do not take into the account the full consequences of Peirce's definition of index, or even Wollen's account of it in existential terms. One of the key claims for an index theorist is that between hand-made pictures, photographs, and words which all have X as their representational content, it is only photographs (at least those which have not been tampered with) that will be indices of X. However, the following Peirce's definition, seriously undermines any such claims:

> I define an Index as a sign determined by its dynamic object by virtue of being in a real relation to it. Such is a Proper Name (a legisign); such is the occurrence of a symptom of a disease. (1966: 228)

Index so defined is much broader than the definition proposed by index theorists – it is certainly broader than the class of automatic reproductions Bazin focuses on. Proper names, for instance, are not automatically assigned but are given. For Peirce the existence of an index simply guarantees the existence of what it is an index of, at least at the moment in time when the causal process which gave rise to the index began. Existence of a proper name, for example, simply guarantees that there was a person to whom the name was assigned at birth.

By extension, some paintings of actual objects and people should, according to Peirce, be their indices no less than photographs of those very objects. It is true that a painting of a person or a car in general does not guarantee that an actual car or person served as a model. But if a painting of X was made with X in front of the painter then, by definition, such a painting guarantees the existence of X, at least at the time of painting. Egon Schiele's painting of Arnold Schoeneberg is

an index of Schoeneberg as much as Man Ray's photograph of Schoeneberg. It is true that simply by looking at the painting we cannot tell if the object of representation was in front of the painter (or that the same painting could have been produced by a freak random process). But this does not matter to Peirce:

> An *index* is a representamen which fulfils the function of a representamen by virtue of a character which it could not have if its object did not exist, but which it will continue to have just the same whether it be interpreted as a representamen or not. For instance, an old-fashioned hygrometer is an *index*. For it is so contrived as to have a physical reaction with dryness and moisture in the air, so that the little man will come out if it is wet, and this would happen just the same if the use of the instrument should be entirely forgotten, so that it ceased actually to convey any information. (1974: 50-51, italics in the original)

In other words, for Peirce something is an index regardless of whatever we know about the causal chain which brought it about or whether we are able to infer one from just looking at the sign. Actual objects do have a specific place in the causal chain that is painting as much as they do in photography. [Photo 1 about here]

Bazin does not have the same problem as index theorists, for he speaks of automatism—which is something narrower than existential guarantee:

> For the first time, between the originating object and its reproduction there intervenes only the instrumentality of a nonliving agent. For the first time an image of the world is formed automatically, without the creative intervention of man. (2005: 13)

It is true that all products of automatic processes are indices of whatever was at the beginning of that process, but not all indices are results of automatic processes as we can see on the examples of proper names and hand-made pictures. For all relevant purposes here we can approximate

automatism with natural counterfactual dependence as explained by Walton (1984).[6] In other words, automatic products are a subset of natural counterfactuals which are in turn a subset of indices. A is counterfactually dependent on B if it is the case that if B had been different A would have been different. Both hand-made pictures and photographs of objects are counterfactually dependent on those objects. In hand-made pictures unlike in photographs, however, beliefs of the agent making the picture play a role in the sense they do not with the photographer. If the drawer/painter hallucinates a dinosaur in front of her, her picture would depict it. Were the photographer to hallucinate the same, the photograph of the area where she believed the dinosaur to be would not depict the dinosaur. In that sense photographs are natural counterfactuals, whereas hand-made pictures are belief counterfactuals. Because hand-made pictures do not belong to the set of natural counterfactuals they also fall outside the set of automatic products. Therefore, Bazin does not suffer the same problem as index theorists do.

Morgan is right to dismiss index theory as an accurate description of Bazin's views but, I believe, for wrong reasons. More importantly, he is one of the rare people to critically engage with index theory at all.[7] His work is also crucial for noticing that on most occasions Bazin's claims about the identity between the model and the photograph have been disregarded rather than seriously dealt with. Although he suggests an examination of metaphors Bazin uses to describe photographs to arrive at a better understanding of this identity, he does not undertake the analysis himself. This is something I will do after I argue that there is more to Bazin's claims on identity than Friday would have us believe.

Friday's Account of Psychological Identity

Friday is one of those rare scholars who seriously engage Bazin's ideas on identity. In order to do so, he criticizes another far more dismissive account of Bazin's identity thesis – Currie's

(1995). In this section I will argue that although Friday is closer to Bazin's ideas than Currie, both of them dismiss material identity too quickly in favor of transparency thesis and psychological identity, respectively.

> Friday starts off with criticism of Currie's view of Bazin and writes the following: According to Currie, Bazin's identity thesis should be understood in its literal sense to be claiming that a photograph "is, or is a part of" the object causally responsible for its creation. […] This view is so strange and implausible that it is difficult to imagine anyone seriously holding it – but particularly Bazin, who observes that "[n]o one believes any longer in the ontological identity of model and image". (2005: 344-345)

Both Currie and Friday dismiss this claim to literal identity – what I call material identity following Friday – for it simply appears too preposterous. Moreover, on the basis of the quote from Bazin in Hugh Gray's translation ("[n]o one believes any longer in the ontological identity of model and image"), Friday claims that it is unreasonable to think that even Bazin speaks of material identity. Both Morgan and Friday, however, claim that there is some kind of identity that is at stake in Bazin and in need of further analysis. Morgan demonstrates this by calling attention to a part of another aforementioned quote: "it [the photographic image] *is* the model" (Bazin 2005: 14).

Friday goes further than Morgan in trying to tease out what Bazin speaks of and does so by providing a context for the above sentence. Friday contextualizes Bazin's claims on identity within the broader argument Bazin makes in the essay and the influence that Jean Paul Sartre's method of phenomenological ontology has had on him. Phenomenological ontology, unlike its analytic variety, according to Friday, ought to be construed "as the attempt to grasp and understand the contents of the world through an investigation of the way they present themselves

to consciousness […] To discover what a thing is, to grasp its being, is to give a lucid description of its appearance to consciousness" (2005: 340).

Furthermore, Bazin's broader argument in the essay revolves around two types of primarily psychological phenomena. One is the historical "second-order" psychological need for escaping death and preserving some sort of existence said to be the driving force behind the history of plastic arts. The other is the "first-order" psychological effect produced by the pinnacle of this history – the discovery of photography. This effect derives partially from the aforementioned second-order need for preservation and, more importantly, from the knowledge we have about the process of making photographs. Bazin's broader argument paired together with his commitment to phenomenological ontology bring us, according to Friday, closer than analytic ontology could to what Bazin means when he speaks of identity between the model and the photographic image. For Friday, the identity Bazin invokes is not material (i.e. of "is, or is a part of" variety) but psychological.

Friday is very convincing in contextualizing Bazin's work. He marshals biographical and bibliographical evidence to prove that, at least to some extent, Bazin subscribed to phenomenological ontology. He also cites a number of passages in Bazin which demonstrate the importance psychological factors have in explaining the history of plastic arts and the status of the photograph for Bazin. The real heavy lifting in Friday's argument is, however, not performed by this contextualization but is to be found in the following two moves Friday makes. The first is citing Bazin as though he is claiming that material identity does not obtain for photographic images: "[n]o one believes any longer in the ontological identity of model and image" (Bazin 2005: 10). Once he establishes this, Friday makes his second move. He produces an alternative to Gray's translation which has, according to Friday, led Currie astray into believing that the

material identity Bazin dismissed only a few pages before does obtain. Friday's translation of the crucial passage eliminates the phrase "share a common being" and runs as follows.

> The lens alone gives us an image of the object capable of bringing back to consciousness our deep unconscious need for a substitute for an object that is more than an approximate transfer: namely, the object itself, but freed from the contingencies of time [...] The image acts upon us through its origin in the being of the model; it is the model. (Friday 2005: 344)

Friday effectively claims that Bazin cannot be contradicting himself here, for he has already dismissed material identity as folly, so given the context of the psychologically informed nature of Bazin's argument the only reasonable thing to conclude is that Bazin is speaking of a different, psychological type of identity. This is not an unreasonable reading for the importance of psychology in Bazin's account cannot be denied. The readings starts falling apart, however, once Friday's key moves are put under closer scrutiny.

The dismissal of material identity cited by Friday is indeed espoused by Bazin. The problem for Friday, however, is that the identity Bazin refers to is not the one between photographic images and their models, rather between *pre*-photographic ones and *their* models. Interestingly enough in citing Bazin that "[n]o one believes any longer in the ontological identity of model and image" Friday is satisfied with Gray's translation which takes "portrait" to mean "image". I imagine a more literal translation of "portrait" would be "portrait", especially given the fact that only two sentences earlier Bazin states the following: "Louis XIV did not have himself embalmed. He was content to survive in his portrait by Le Brun" (2005: 10). Even if we stick with "image" as the translation, it is still the case that Bazin is speaking only of pre-photographic images. First, in this essay Bazin mentions photography for the first time only in

the paragraph following the one Friday cites. Second, up until that point Bazin has satisfied himself with presenting a list of pre-photographic forms of cheating death – mummy, terra cotta statues, and arrow-pierced clay bear. Finally, it is Baroque portraiture that terminates this list. Therefore, in the sentence in question Bazin simply means that nobody in the Western world would say that any kind of identity (numerical, functional, psychological or material) obtains between models and *hand-made* pictures (or hand-made plastic artworks). In doing this, moreover, he sets up an opposition between photography and hand-made pictures he will explore in more detail in the remainder of the essay. One opposition is certainly the automatism I spoke of in the previous section. The other is, I claim, the appeal to material identity.

It is this very appeal that remains present even if Friday's translation does away with the phrase "share a common being" and despite the curios fact that "is" is, for some reason, de-italicized: "it [the photographic image] is the model" (Friday 2005: 344).[8] It is certainly true that in Friday's translation the phrase "its [the image's] origin in the being of the model" replaces a claim to identity with a claim about the causal connection between the model and the image. There is also no denying that Friday's phrase "the image acts upon us" provides a phenomenological slant to Bazin's claims. And there is no doubt that Bazin insists throughout the essay on the role that knowledge about the photographic process plays in our apprehension of the photographic image. Crucially:

> This production by automatic means has radically affected our psychology of the image. The objective nature of photography confers on it a quality of credibility absent from all other picture-making. In spite of any objections our critical spirit may offer, we are forced to accept as real the existence of the object reproduced, actually *re*-presented, set before us, that is to say, in time and space. Photography enjoys a certain advantage in

> virtue of this transference of reality from the thing to its reproduction. (Bazin 2005: 12, italics in the original)

Now, by contextualizing Bazin's approach with the method of phenomenological ontology Friday can say that, according to Bazin, it is only psychologically that we "accept as real the existence of the object" and do so "[i]n spite of any objections our critical spirit may offer." Our critical spirit would then be closer to the method of analytic ontology, whereas our acceptance of the object's real presence to that of phenomenological ontology. Then we could also explain away Bazin's later literal appeal to identity by claiming that this is merely a metaphorical way of saying that the knowledge about photography's automatism exerts such a strong psychological impression which, despite our better analytic judgment, makes us say that model and the photographic image are one and the same. In Friday's own words:

> Photographs approach closer to the psycho-logical ideal of the identity of image and object because they are made by a process in which patterns of light reflected from an object are encoded and reproduced without the intervening involvement of mankind […] In fact, the heart of the identity thesis is the description of the psychological response to indexical signs produced in the manner of an impression of object to surface. (Friday 2005: 344-345)[9]

With the above in mind, Friday may retort to my criticism of his first step in the argument as follows: even if Bazin explicitly denies material identity to pre-photographic images only, he does not subscribe to material identity in the case of photographic images. Instead, he offers a psychological version of identity. I will now argue against this view by providing a detailed analysis of similes Bazin employs. I am not claiming that psychological commitments are not important to Bazin, but I am claiming that they are grounded in more than folk knowledge about

automatism in photography and certain second-order psychological needs for preservation – namely, in actual commitments to material identity.

Sharing a Common Being

Morgan states that "[n]o one argues that a footprint *is* a foot or that the barometer *is* the air pressure, despite the fact that there is a direct, nonsubjective causal relation between them" (2006: 450). I have no intention of contradicting him. Footprint ordinarily means the graphic/spatial pattern resulting from an impression of a shod or unshod foot in some malleable material like sand or mud. Barometer, on the other hand, is a device for measuring air pressure. But these indices are not the examples Bazin refers to in "The Ontology of the Photographic Image" to draw analogies with photographs. In fact, what Morgan thinks are metaphors I believe are proper similes. In order of appearance, they are death mask, the Holy Shroud of Turin and fingerprint.

> Let us start with the fingerprint simile. Friday states the following:
>
> The photograph and its object, by contrast [with painting, according to Bazin], "share a common being, after the fashion of a fingerprint" [...] If a fingerprint shares a common being with its unique cause, and does so because the manner of this cause is the imprinting of flesh to surface analogous to the imprinting of an object onto film by means of reflected light, then the shared being must have a psychological character. (Friday 2005: 345)

But the analogy of imprinting is not the only one available. Notice the phrase "share a common being" (with which Friday does not have a problem with now), which points to something else than simple analogy in the method of production and joint cause. Certainly, we often think of fingerprints as ink marks made by dipping the fingers and pressing them against a piece of paper.

Or we think of them simply as unique graphic patterns which serve various identification purposes, most often for solving crimes. But what *are* these fingerprints left at the crimes scene? It is rarely the case that perpetrators run around with ink on their fingers leaving marks all over the place. Nor do they leave some immaterial graphic patterns. What they leave behind are the secretions of sweat glands present in the epidermis. So in a perfectly proper sense some things we refer to as fingerprints are bodily fluids. And bodily fluids are a part of the body. Therefore, in this sense, it is perfectly proper to say that my fingerprint is a part of my body. In other words, there is no reason to deny that in at least this meaning of the word "fingerprint" fingerprints are materially identical to the body responsible for them. What fingerprints "share a common being with" is, I take it, the body itself not only because the body is their unique cause but because they are actually a part of that body. Moreover, they are not necessarily icons of that body for they may be smudged to a point at which they no longer allow for identification of whoever left them. Insofar they also chime well with Bazin's dismissal of the importance of similarity relations.

[Callout 2 about here] Precisely the same relevant properties obtain in the case of the Shroud of Turin Bazin footnotes to be another analogue to photographs:

> Here one should really examine the psychology of relics and souvenirs which likewise enjoy the advantages of a transfer of reality stemming from the "mummy-complex." Let us merely note in passing that the Holy Shroud of Turin combines the features alike of relic and photograph. (2005: 14)

The folk view of the Shroud is that it is Christ's burial cloth and that it contains not only the image of Christ but, more importantly, that this image is made up of Christ's actual blood and sweat.[10] The Shroud, therefore, contains the actual body of Christ in a very material sense (a sense with far less mystery about it than the holy Eucharist). Moreover, the image here appears

only as an added bonus for the Shroud would lose none of its appeal even if the image of Christ could not be made out and only blots of blood and sweat remained. They would still remain the blood and sweat of Christ.[11] [Photo 2 about here]

I take it, therefore, that when Bazin says that "[t]he photograph as such and the object in itself share a common being, after the fashion of a fingerprint" (Ibid. 15) he means that at least a part of the photographic image of the object is in a proper sense a part of that object. I do not think he is right in claiming that this holds for all the photographs, but I propose this is not as preposterous as it sounds for, from the perspective of the dual theory of light, there are some photographs for which it does obtain. Namely, negatives of light-emitting objects, i.e. objects which produce their own light. And I propose to explain why Bazin was seduced into thinking that it holds for all photographs.

Bazin's Identity Thesis Explained under the Dual Theory of Light

It is in connection with the analogy of photography to the production of death masks that Bazin speaks of light as a component in making photographs.

> There is room [...] for a study of the psychology of the lesser plastic arts, the molding of death masks for example, which likewise involves a certain automatic process. One might consider photography in this sense as a molding, the taking of an impression, by the manipulation of light. (Ibid. 12)

[Callout 3 about here] This is the only time that Bazin speaks of light as a part of the automatic process of photography in his ontology essay. It does not tell us much about Bazin's grasp of the physics of light; he certainly does not distinguish between the reflection and emission of light. He does, however, specify that the light is the means by which the impressions of objects are made. Given that the analogy here is both one of making an impression automatically and one of

making the impression by a physical body – the face – I take it that Bazin's quote suggests an understanding of light as physical bodies.[12] In other words, the quote strongly implies that in the example of photography Bazin speaks of light as particles. This is certainly something that the dual theory of light contemporary to Bazin would allow for.

Briefly speaking, the dual theory of light was proposed as early as 1905 by Albert Einstein as a way of explaining the photoelectric effect which could not be accounted for in terms of the nineteenth century understanding of light as a wave. Simply put, Einstein proposed that at least on some occasions light should be construed as particles rather than as a wave. By the 1920s, the dual theory of light became mainstream and the term "photon" was coined to denote a single particle of light (Pais 2005: 402-422). It is safe to assume, therefore, that a highly educated person such as Bazin would have been aware of the option to treat light as particles when writing "The Ontology of the Photographic Image" in the 1940s. This is attested by the fact that between 1934 and 1941 Bazin attended a public high school where he was taught a range of disciplines including physics, natural sciences and mathematics (Cortade 2010: 13), took a university entrance exam which included physics and chemistry (*Journal officiel de la République française* 1937, Sep 29: 226) and, finally, studied at the prestigious École Normale Supériuere at St. Cloud where he had further formal training in the sciences (Andrew 2013: 12). With this in mind let me propose one type of photographic images for which, under the wave-particle theory of light, it may be properly said that they share a part with the object they are of. Consider a negative image of the Sun where the negative is understood as the material base covered with photosensitive material which is in direct contact with the light of the object photographed. Sun emits light waves/particles which hit the light-sensitive emulsion causing a chemical reaction which culminates in an image of the Sun. Now, according to the dual theory of

light, can we first satisfy the condition of material identity between the light and the Sun and say that light waves/particles emitted by the Sun are a part of Sun? I believe we can. Under the dual theory of light, light particles, i.e. photons are products of reactions in the Sun's core which travel to the Sun's surface and eventually continue their path in the universe (some of them reaching the Earth and allowing us to take photographs among other things). The fact that they leave the Sun should not bother us here much for it has been shown above that although various types of bodily fluids leave bodies this does not preclude us from calling these fluids parts of the bodies in question. Similarly, if I cut my finger off during cooking it is still my finger.

[Callout 4 about here] I have already noted that the dual theory of light, available to Bazin at the time of writing, allows descriptions of light both as waves and as particles. It is true, moreover, that if we opt to describe light as waves rather than as particles we would be far less inclined to say that photons are part of the Sun, or any other light-emitting object. I simply want to say that Bazin here articulates the particle version rather than the wave one and that under the dual model there is nothing problematic in doing so. This particle view of light is further corroborated with a quote from another essay of his – "Theater and Cinema—Part Two" – where light is again seen as a *body* making the impression:

> The photograph proceeds by means of the lens to the taking of a veritable luminous impression in light-to a mold. As such it carries with it more than mere resemblance, namely a kind of identity. (Bazin 2005: 96)

If under the dual theory of light we can say that light particles coming from the Sun are a part of the Sun and if these eventually reach the photograph, then under the same theory there are occasions on which we can say that the model actually *touches* the photograph. As long as we understand "to touch" to mean "to come into or be in contact" then the definition of the term is

satisfied. That photographs touch models is precisely what Turvery (2011: 114) denies in criticizing index theorists such as Mary Ann Doane (2007: 140-142) who take indexicality to be something narrower than existential guarantee, i.e. who think of indices as signs that were in direct contact with or touched by entities that they are an index of. However, although under the dual theory of light it can be said that the negatives of light-emitting objects are touched by the objects in question, not even Doane's account of indexicality can fully capture Bazin's identity thesis for there is far more to material identity than touch. Bazin says that the photographic image and the model "share a common being"; that in a sense the photographic image *is* the model; that, as he puts it in the above quote, there is "a kind of identity" between the two.

Having argued under the dual theory of light that the light coming from the light-emitting object – a proper part of that object – reaches the negative, can we make the final step to say that this light is or is a part of the image produced? I do not see why not. In our example with the negative of Sun above, it is also proper to say that the light from Sun is a part of the photographic image under the particle aspect of the dual view of light. Photographic image is the end product of a photochemical reaction instigated by contact between light and a thin cover of photosensitive material. Now one of the things chemistry of Bazin's time allows us is to say that parts of the compounds entering a chemical reaction are parts of the compounds resulting from that reaction. Material base of the image is what the result of the reaction is; photosensitive material and light are the compounds that enter into it.[13] Therefore, in a proper sense, light is a part of the photographic image. Notice, moreover, that when speaking of these reactions we *need* to, under the chemistry model available to Bazin, think of light as a particle rather than a wave. So, unlike above, it is not only an avenue open for Bazin, rather one that he should have taken.

Under the dual theory of light there are, therefore, photographic images a part of which is actually materially identical with a part of the object photographed. In other words, under this framework some photographic images "share a common being" with their model, there is a "kind of identity" between the two. In the above example parts of the Sun are parts of the photograph of the Sun. Other examples include negatives of numerous celestial objects including stars, a number of atmospheric objects including aurora borealis and lighting, eclipse, explosions, fire, heated objects, lava, city lights, LEDs, bio-, electrochemi-, crystallo-luminescent objects, etc. [Photo 3 about here] Photographs of the night sky, for instance, will almost regularly share a common being with the night sky. The dual theory of light is, therefore, the reason why Bazin's statements on identity are neither as ludicrous as they might appear on first inspection nor necessarily wrong. And this is also why Bazin is free to insist that similarity relations play no role in the special relation between the photograph and its object.[14] For a negative of the Sun, for instance, can be as smudged as possible, the two will still "share a common being".

Up until now I have been talking of what Bazin is allowed to say under the dual theory of light but this does not mean that the dual theory itself is valid. In other words, it is one thing to argue that Bazin's identity thesis reasonably derives from the dual theory of light of his day and another that Bazin's thesis actually holds for the examples listed. Put differently, Bazin's identity thesis is true in the cases listed above if the dual theory of light is true (or if the particle theory of light is true because he articulates light as particles). Given that the theory in question is a scientific theory and that scientific theories are not so much proven true as much as they remain unfalsified we should consider what the current status of the wave-particle theory of light is to see if Bazin's identity thesis is compatible with the latest physics of light. If it is then we can also say that, for the aforementioned examples, Bazin's identity thesis makes sense even today.

The wave-particle behavior of light is precisely one of the phenomena that classical physics – geared towards the wave model of light – could not account for and which gave rise to quantum mechanics. The present-day quantum mechanics undoubtedly provides far more insights than Bazin would have been aware of at the time of writing his essay. The reactions in the Sun giving rise to photons have, for instance, been described in detail with recourse to developments in quantum mechanics and the processes such as the proton-proton chain reaction. Similarly, photochemistry builds on quantum mechanics and the photoelectric effect to give us detailed formulas of reactions which result in the formation of the photographic image on a negative. In both cases, however, photons are cited as the elements in the textbooks citing the formulas in question (Wardle 2009: 2-6; Wong 2004: 363-366). And these photons, as the most recent textbooks on quantum mechanics attest, are regularly explained in terms of wave-particle duality (Zettili 2009: 26-27). Put differently, although Bazin's account makes only rudimentary use of the dual theory of light - the option to treat light as consisting of particles during light-emission and in reactions taking place in photography – his identity thesis, as long as it pertains to negatives of light-emitting objects, remains compatible with the most up-to-date understanding of the theory of light. [Callout 5 about here]

Bazin's Generalization of Identity Thesis

Bazin, however, does not limit himself to negatives of light-emitting objects. For him, it is not only the negatives that share a common being with the model, but all standard photographic images, including those of objects which do not emit light. Regardless of whether light is a particle, wave, or wave-particle, however, this is wrong for two reasons.

[Callout 6 about here] In the case of objects that do not emit light – the everyday objects of photographs such as people, animals, landscapes, my car (with the exception of lighting

equipment), etc. – the light is not a product of those bodies in the sense it is a product of the Sun. It is true that these objects absorb some of the photons that reach them (the resulting consequence of which is the objects' color and brightness), but the photons they absorb are not the ones they reflect. So the light that eventually reaches the negative was never a part of the object photographed. In the case of light-emitting objects, the light on the negative is not transferred onto the positive or any intermediary copy in the photo printing process. The reason is that negative is not a light-emitting object. In other words, in the production of copies of negatives (enlarged negative, positive, master copy, etc.) the light is shone through the negative and it is this new light that is a part of the copy, not the light that is a part of the negative.[15]

image

I believe that my proposal can also explain why Bazin found the identity thesis to hold for all photographs and types of objects. First, for the objects which are not light-emitting in the above sense it is not uncommon to say that they emit light when they are in fact reflecting it. For instance, Morgan writes that "Bazin [does not need] to believe that photographs of the same object taken with different lenses are about different things because they emit different light patterns" (2006: 451). Once this conflation is made we are only a short step away from saying that the light emitted is the object's light and then making a logical mistake in thinking that that makes the light a part of that object. In fact, it seems to me that this very conflation takes place in another key essay of Bazin's I already cited from:

> It is false to say that the screen is incapable of putting us "in the presence of" the actor. It does so in the same way as a mirror---one must agree that the mirror relays the presence of the person reflected in it-but it is a mirror with a delayed reflection, the tin foil of which retains the image. (2005: 97)

If the screen behaves like a mirror with a delayed reflection, as Bazin claims it does, that means that when looking at an object on the screen the screen reflects the very light that was coming from the object at the time the object's film photographic image was made. In order to do so, the film photographic image has to retain that very light. Given that a roll of film Bazin refers to is nothing but a sequence of photographic images it is safe to conclude that what is retained in the photographic images is the very light of the model. So photographs are mirrors with a delay just like screens are. But if light can be stored and then reflected on a later occasion then what Bazin is effectively saying is that the photograph emits its own light which, for him, is no different than reflecting the light of the object photographed.

The reason for why not only negatives but all photographs derivative of them would retain this identity is also cleared up now. According to this line of thinking, negatives and the in-between products of photographic printing can now all be seen as reflecting the light of the model by emitting its own light, i.e. as delayed mirrors. Therefore, no matter how many in-between products intervene between the object and the end photograph we get a chain of partial identity extending to the source photographed.

In making a claim for identity Bazin is, however, not being ludicrous nor is he producing vague metaphors. He is saying that a part of a photograph *is* a part of the object. And in fact, as I have argued, under the theory of light there are photographs which satisfy this claim. Why Bazin makes a faulty generalization, in short, is an easy conflation between the notions of emitting and reflecting light.

Postscript: Consequences for the Ontology of Digital Images

[Callout 7 about here] As a way of conclusion I would like to offer a couple of thoughts on the potential consequences of the argument proposed here for the understanding of the ontology of

digital images. It has been often claimed that it is indexicality that, ontologically speaking, separates analog from digital images. Recently, however, the distinction has been called into question by scholars such as Tom Gunning (2004) and Turvey (2011). I certainly agree with them that digital photography is no less indexical than analog one, but I also propose that, if indexicality is to be understood in Peirce's terms of existential guarantee, then the same also holds for numerous paintings. Moreover, if there is an ontological distinction between digital and analog photography, to my mind it is to be articulated in terms of material identity advocated here, rather than indexicality. In other words, I believe we need to examine in more detail the physics of digital circuitry. Briefly speaking, we need to determine whether at least some of the electrons making up the voltage in flip-flop circuits (essentially what we talk of when referring to an information bit) are the electrons which absorb the photons when light makes contact with the digital camera's photo-sensors. If this is not the case then we cannot speak of any identity between the model and the digital photograph. If it is, I suspect we also need to check the relationship between the electrons in flip-flops and the image on the display device for the former are better described as the image's coded version rather than the image itself. The procedure would be no different for digital imagery derived from techniques which do not use photons from the visible spectrum such as tomography and magnetic-resonance imaging. Our understanding of the ontology of photographic images, I am confident, can only gain from a further articulation of the physics behind them.

---

[1] For an influential account of this commitment see Carroll (1986).

[2] In "Painting and Cinema" Bazin (2005: 164-172) does say that cinema "cannot give us paintings as they really are" but it seems this statement pertains more to the phenomenological reality of paintings (color, geological time and framing) rather than to the special ontological

relation between the photograph and its object. Regardless of what we think Bazin's view of the matter is the problem for index theorist is as follows. To say that a still from, say, *Bambi* (1942) has no special ontological relation to reality, whereas a still from *The Maltese Falcon* (1941) does, confuses or deliberately obfuscates the terms of relation. A still from *Bambi* is an index of whatever was in front of the camera at the time when the still was made as much as a still from *The Maltese Falcon* is an index of whomever and whatever was in front of the camera during shooting. The only difference is that in *Bambi* it is a drawing that is in front of the camera, whereas in *The Maltese Falcon* it is the set and actors on it. If, at this point, index theorist points out that the content of the still from *Bambi* has no indexical relation to whatever it depicts, say, Bambi running through the forest that would certainly be true for there never existed such and such white-tailed deer called Bambi. But the same holds for *The Maltese Falcon* – there never existed such and such a person called Sam Spade.

[3] Another way for accounting of this special relation has been developed under the name of transparency thesis. For details see Kendall Walton (1984, 2008).

[4] Morgan, admittedly, never puts it in these exact terms but he does list a number of classic examples of indices to state the following: "No one argues that a footprint *is* a foot or that the barometer *is* the air pressure, despite the fact that there is a direct, nonsubjective causal relation between them. However we want to describe what it is that Bazin is arguing, and whatever we think of it as an argument, it is clear that we cannot account for his description of the photograph along the model of an indexical sign" (Morgan 2006: 9, italics in the original).

[5] For the view that the transparency thesis is in some sense espoused by Bazin see Walton (1984, 2008), Currie (1995), and Carroll (2008).

[6] Diarmuid Costello and Dawn M. Phillips (2009) are correct to point out that, strictly speaking, the two are not equivalent. For another account of automatism in Bazin see David Brubaker (1993).

[7] This reading of Bazin is not even mentioned in the interpretations of Bazin by Walton (1984, 2008), Carroll (1986, 2008) and Currie (1995). A recent exception is Turvey (2011: 112-118). In a tradition which does not partake in analytic philosophy, criticism of index theory may be found in Tom Gunning (2004).

[8] Morgan has also provided his translation. Bazin's commitment to ontological identity remains there as well (the italics also make an appearance): "The photographic image is the object itself, the object freed from temporal contingencies [*libéré des contingences temporelles*]. No matter how fuzzy, distorted, or discolored, no matter how lacking in documentary value the image may be, it proceeds, by virtue of its genesis, from the ontology of the model; it *is* the model [*elle procède par sa genèse de l'ontologie du modèle; elle* est *le modèle*]" (Morgan 2006: 450, italics in the original).

[9] It should be noted that there is the same imprecision in Friday regarding the nature of the index as there is in index theorists: "To put Bazin's point in terms he does not use, paintings represent iconically, but photographs are the coincidence of the representational categories of icon and index" (Friday 2005: 343). As I have demonstrated above, if existential guarantee is the defining trait a number of paintings represent indexically as well as iconically.

[10] For more details see Patrick Maynard (1983: 155-156).

[11] In the case of fingerprints and the Shroud we can even invoke biological identity on the basis of DNA traces. Admittedly, it is not that likely that DNA and notions of biological identity would have been available to Bazin at the time.

[12] The analogy here does not go further into the identity relations as it does in the examples of fingerprints and the Shroud of Turin.

[13] Light is not a catalyst but a proper element in the reaction, precisely like in photosynthesis.

[14] This is in opposition to Friday (2005: 348) who thinks that it might be necessary for Bazin to weaken his claim and allow some similarity relations to play a role in his account of photography.

[15] For this reason Turvey (2011: f44) is correct to point out that photographic printing eliminates direct contact with the object photographed from the process of reproduction denying the status of index to photographs made out of negatives. Put differently, Doane's (2007) understanding of index applies only to negatives of light-emitting objects. This is also why negatives, although partially identical with the object photographed, are not transparent in Walton's (1984) sense. In other words, in principle I take Berys Gaut's (2010: 78-97) argument that the direct transmission of light is the necessary component of the literal meaning of "seeing".

Bibliography

Allen, Richard. 2014. "'There Is Not One Realism but Several Realism': A Review of Opening Bazin." *October* 148: 63-78, doi: 10.1162/OCTO_a_00175.

Andrew, Dudley. 2013. *André Bazin*. New York: Oxford University Press.

Bazin, André. 2005. *What is Cinema?* Trans. and ed. Hugh Gray, vol. 1. Berkeley: University of California Press.

Brubaker, David. 1993. "André Bazin on Automatically Made Images." *The Journal of Aesthetic and Art Criticism* 51(1): 59-67, doi: 10.2307/431971.

Carroll, Noël. 1986. *Philosophical Problems of Classical Film Theory*. Princeton: Princeton University Press.

Carroll, Noël. 2008. *The Philosophy of Motion Pictures.* Malden and Oxford: Blackwell Publishing.

Cortade, Ludovic. 2010. "Cinema across Fault Lines: Bazin and the French School of Geography." Pp. 13-31 in *Opening Bazin: Postwar Film Theory & Its Afterlife*, eds. Dudley Andrew and Hervé Joubert-Laurencin. New York: Oxford University Press.

Costello, Diarmuid, and Dawn M. Phillips. 2009. "Automatism, Causality and Realism: Foundational Problems in the Philosophy of Photography." *Philosophy Compass* 4(1): 1-21, doi: 10.1111/j.1747-9991.2008.00193.x.

Currie, Gregory. 1995. *Image and Mind: Film, Philosophy and Cognitive Science*. Cambridge and New York: Cambridge University Press.

Doane, Mary Ann. 2007. "The Indexical and the Concept of Medium Specificity." *differences* 18 (1): 140–42, doi: 10.1215/10407391-2006-025.

Friday, Jonathan. 2005. “André Bazin’s Ontology of Photographic and Film Imagery.” *The Journal of Aesthetic and Art Criticism* 63(4): 339-350, doi: 10.1111/j.0021-8529.2005.00216.x.

Gaut, Berys. 2010. *A Philosophy of Cinematic Art*. Cambridge and New York: Cambridge University Press.

Gunning, Tom. 2004. “What’s the Point of an Index? or, Faking Photographs.” *Nordicom Review* 25 (1-2): 39-50.

Journal officiel de la République française: lois et décrets, circulaires, avis, communications, informations et annonces... 1937, September 29.

Maynard, Patrick. 1983. “The Secular Icon: Photography and the Functions of Images.” *The Journal of Aesthetic and Art Criticism* 42(2): 155-169, doi: 10.2307/430660.

Morgan, Daniel. 2006. “Rethinking Bazin: Ontology and Realist Aesthetics.” *Critical Inquiry* 32(3): 443-481, doi: 10.1086/505375.

Pais, Abraham. 2005. *Subtle is the Lord: The Science and the Life of Albert Einstein*. Oxford and New York: Oxford University Press.

Peirce, Charles S. 1966. *The Collected Papers of Charles Sanders Peirce*. Ed. Arthur W. Burks, vol. 7-8. Cambridge, MA: Belknap Press of Harvard University Press.

Peirce, Charles S. 1974. *The Collected Papers of Charles Sanders Peirce*. Eds. Nathan Houser and Christian Kloesel, vol. 5-6. Cambridge, MA: Belknap Press of Harvard University Press.

Turvey, Malcolm. 2011. “Ken Jacobs: Digital Revelationist.” *October* 137: 107-124, doi: 10.1162/OCTO_a_00060.

Walton, Kendall. 1984. “Transparent Pictures: On the Nature of Photographic Realism.” *Critical Inquiry* 11(2): 246-277.

Walton, Kendall. 2008. *Marvelous Images: On Values and the Arts*. Oxford and New York: Oxford University Press.

Wardle, Brian. 2009. *Principles and Application of Photochemistry*. Chichester: Wiley.

Wollen, Peter. 1969. *Sings and Meaning in the Cinema*. Bloomington: Indiana University Press.

Wong, Samuel S. M. 2004. *Introductory Nuclear Physics*. 2nd Edition. New York: J. Wiley.

Zettili, Nouredine. 2009. *Quantum Mechanics: Concepts and Applications*. 2nd Edition. Chichester: Wiley.

Callouts

1. some paintings of actual objects and people should, according to Peirce, be their indices no less than photographs of those very objects.
2. when Bazin says that "[t]he photograph as such and the object in itself share a common being, after the fashion of a fingerprint" (Ibid. 15) he means that at least a part of the photographic image of the object is in a proper sense a part of that object
3. a highly educated person such as Bazin would have been aware of the option to treat light as particles when writing "The Ontology of the Photographic Image" in the 1940s
4. Under the dual theory of light there are, therefore, photographic images a part of which is actually materially identical with a part of the object photographed
5. Bazin's identity thesis is true in the cases listed above if the dual theory of light is true
6. Why Bazin makes a faulty generalization, in short, is an easy conflation between the notions of emitting and reflecting light.
7. if there is an ontological distinction between digital and analog photography, to my mind it is to be articulated in terms of material identity advocated here, rather than indexicality.